



Keweenaw Bay Indian Community  
Natural Resources Department

# Babaamaajimowin Akiing

SPRING 2014

NEWS FROM THE EARTH

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## KBIC Community Sugarbush Has Successful Second Season

In the spring of 2013, the KBIC Forestry Department in collaboration with the KBIC Department of Natural Resources, Department of Health and Human Services, Public Works, KBOCC, and the Cultural Resources Committee commissioned the 1st Annual Community Sugarbush operation. The Tribal Council reserved approximately 60 acres of land to establish the sugarbush. The objectives of the event include: rejuvenating the tradition, informing individuals of the process from sap to syrup, tree identification and to bring people together to share knowledge, stories and the experience. In the inaugural year, approximately 86 taps were installed by volunteers during the end of February and the beginning of March. Participants also brought out sap from their own efforts to add to the pot. Throughout the season, over 40 people came out to help with the process. Participants ranged from young children to community elders. Storage tanks were utilized to hold the sap until the weekends in which boiling commenced. After all the effort, 18 gallons of syrup and 10 pounds of sugar were produced. Volunteer hours were logged for individuals and the finished products were distributed based on the amount of time spent in the sugarbush. Volunteers also donated a portion of their syrup to the Ojibwa Seniors who were treated to a pancake breakfast.

The 2<sup>nd</sup> Annual Community Sugarbush came to a close in April. This year we expanded the effort to 180 taps. After the long and arduous winter, many people were excited to get outside and participate. Volunteers are always needed and welcomed. Anyone interested in participating or to find out more about KBIC Forestry Department activities, contact Jerry Jondreau, Tribal Forester at (906) 353-4591 or via email: [gjondreau@kbic-nsn.gov](mailto:gjondreau@kbic-nsn.gov)



*Enjoying some sap straight from the tree*



*The finished product*

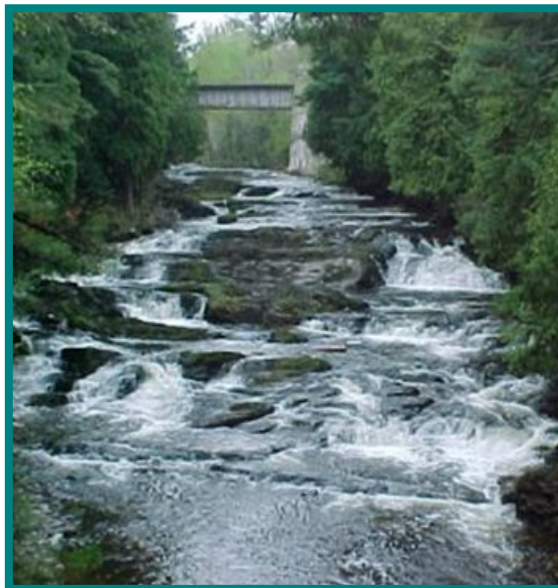
# Protecting Our Waters

KBIC is currently seeking treatment in a manner similar to a state (TAS) for programmatic approval under the Clean Water Act (CWA) section 303/401. We are currently awaiting approval from the Environmental Protection Agency (EPA). TAS approval will mean that KBIC will be eligible to administer specific programs in the same manner as a state would. These specific programs under this application are Water Quality Standards (WQS) and certification program.

Water quality standards are set by the federal government, states and authorized tribes. These agencies regulate how clean water should be. Once our application is approved, it will allow KBIC to develop and submit for approval by the EPA, our own water quality standards for KBIC reservation waters. Our standards will be designed to meet the specific needs and goals of the Community by identifying and defining the uses unique to our culture.



*Manitou Island*



*Falls River, Baraga County*

When the EPA approves KBIC for TAS for purposes of WQS, the tribe will also be eligible to the same extent as a state for purposes of certifications conducted under Section 401 of the CWA. Section 401 certifications are a useful tool for protection of water quality. This will mean that KBIC will be eligible to evaluate whether a discharge under a federal license or permit would be consistent with KBIC's WQS and decide to grant, deny, or condition a water quality certification under Section 401 of the CWA.

Once approved, KBIC will be the first tribe in Michigan to receive TAS under the Clean Water Act (CWA) section 303/401! In Region 5 (Michigan, Wisconsin and Minnesota) there are only five tribes with this approval including; Bad River Band, Lac du Flambeau, Fond du Lac Band, Grand Portage Band, and Sokaogon Chippewa. Among KBIC awaiting approval are Red Lake Band and Forest County Potawatomi.

Approval of our TAS application for Sections 303(c) and 401 of the CWA is a huge step for KBIC. It is an exertion of our sovereignty and ensures the protection of our reservation waters that are covered within the application.



# Protecting the Health of KBIC

The KBIC Natural Resource Department (NRD) is currently conducting a study of fish consumption amongst KBIC members. Eating fish has been shown to provide several health benefits and for many members of Tribal communities, it's a way of life. But efforts are needed to make sure that fish is safe to eat. Some fish in Michigan's Upper Peninsula are contaminated with mercury, PCB's, and dioxin from industrial sources and may be especially harmful to pregnant women, developing fetuses, children, and the elderly. While Tribal members are exposed to the same contaminants as those who consume local fish, higher consumption rates would result in higher exposure and therefore higher health risk. While we intuitively believe that KBIC members consume fish at higher rates than the overall population due to cultural practices and subsistence lifestyles, there is a lack of technically defensible and localized data specific to KBIC. The purpose of this project is to collect fish consumption data for KBIC through a fish consumption survey which will ultimately lead to decisions which are more protective of tribal member health.

Over the last year, staff at NRD has worked to leverage funding and resources to be able to conduct this project. To ensure accuracy and legal defensibility of the results, consultants have been hired to develop the survey questionnaire, ensure quality control, and perform statistical analyses of the data. We are currently forming a Survey Workgroup to provide input and guide the development of the survey. Once the survey is developed, a sample population of KBIC tribal members will be selected randomly from enrollment records to be interviewed about fish consumption practices. We anticipate that interviews will be conducted in late summer throughout fall 2014. If you are randomly chosen to be interviewed, your participation in the survey is greatly appreciated and your cooperation will help to ensure the success of this project and ultimately the health and well-being of KBIC members for future generations!

## **Guidance on consuming fish safely can be found at:**

Great Lakes Indian Fish & Wildlife Commission, Inland Lakes Ogaa (Walleye) Consumption Guidance <http://glifwc.org/Mercury/Michigan2014.pdf>

Michigan Eat Safe Fish Guide: [http://www.michigan.gov/documents/mdch/MDCH\\_EAT\\_SAFE\\_FISH\\_GUIDE - UPPER\\_PENINSULA\\_WEB\\_455361\\_7.pdf](http://www.michigan.gov/documents/mdch/MDCH_EAT_SAFE_FISH_GUIDE_-_UPPER_PENINSULA_WEB_455361_7.pdf)



*KBIC Tribal member Jerry Jondreau enjoying a day of fishing with his daughters.*

# Walleye Stocking Program Update

Table 1. KBIC Walleye Stocking					
Location	2009	2010	2011	2012	2013
Portage Lake	0	3,971	309,304	507,282	508,344
Huron Bay	5,883	2,821	13,464	351,565	256,090
Keweenaw Bay	10,587	5,789	25,102	1,921	102,470
<b>TOTAL</b>	<b>16,470</b>	<b>12,581</b>	<b>347,870</b>	<b>860,768</b>	<b>866,904</b>
				<b>TOTAL</b>	<b>2,104,593</b>

The Lake Superior Ojibwa were traditionally a hunter/gatherer society, relying on local natural resources for subsistence. Subsistence fishing has remained a central part of modern Ojibwa life and many look forward to the spring ice break-up and the chance to harvest walleye from local waters.

Recognizing the impact that local recreational and subsistence fishing has on the walleye fishery and the cultural importance of this species, the Keweenaw Bay Indian Community Natural Resources Department (KBNRD) initiated a walleye rearing and stocking program. The program was developed to support walleye population restoration efforts in the western Lake Superior region and tribal walleye harvest.

The walleye rearing area consist of two ½ acre ponds, with a planned expansion to include 1- acre pond, incubation building, and well in 2014. Since 2009, KBNRD has stocked over 2,000,000 walleye of varying size into Portage Lake, Huron Bay and Keweenaw Bay (see Table 1 above). In 2013 alone, KBNRD stocked over 860,000 walleye fry and fingerlings. KBNRD intends to continue to manage the local walleye fishery with strategic stockings efforts.

Walleye stocked in the Portage Lake system by KBNRD have been caught by local fisherman. In September 2013 a Chassell resident caught a 15" walleye marked with a KBNRD micro-Floy identification tag that was placed in this fish back in 2011. The gentleman returned the tag to the KBNRD with a note remarking that the KBIC walleye stocking program was "much appreciated." While tribal walleye harvest remains a controversial issue across MN, WI and MI, KBIC is making strides locally to help maintain a sustainable walleye fishery for everyone to enjoy.

In addition to the walleye rearing program, the KBNRD also rears and stocks lake trout and brook trout. KBNRD lake and brook trout stocking began in the early 1990's. Ultimately, the goal of Keweenaw Bay's tribal hatchery is to rear native fish for stocking into Lake Superior and adjacent streams to provide a self-sustaining fishery on the reservation and 1842 ceded waters. Our current production goal is 50,000 lake trout yearlings (6" fish), 40,000 brook trout yearlings, 30,000 coaster brook trout and 50,000 walleye fry annually. Most years we far exceed these stocking numbers.



*Walleye raised in the KBIC walleye ponds ready for stocking into local waters*

# Annual Environmental Fair

The KBNRD held the third annual Environmental Fair to celebrate Earth Day on April 23th. The event provided environmental education to area school children, grades 2<sup>nd</sup> through 5th. Attending the event were 286 kids from L'Anse, Sacred Heart, Baraga, and Arvon area schools. There were displays from thirteen different organizations discussing topics such as storm water treatment, recycling, air pollution, mining, macroinvertebrates, fish and invasive species, sustainable energy, forestry, and wildlife.

Earth Day is officially April 22<sup>nd</sup> and is a day to celebrate Mother Earth and draw attention to environmental issues. The first Earth Day was the brainstorm of Senator Gaylord Nelson, a U.S. Senator from Wisconsin, which began as an idea after witnessing the Cuyahoga River going up in flames in 1968 for the second time. The first Earth Day received support from both political parties - Republicans and Democrats, as well as rich and poor, tycoons and labor workers. It led to the formation of the United States Environmental Protection Agency (EPA) that same year, as well as the passage of the Clean Water Act, Clean Air Act, and the Endangered Species Act. Earth Day has been celebrated every year since 1970 and in 1990, the event went global. The events purpose of encouraging social and political action by drawing attention to the environmental cause remains unchanged.



*Water Resources Specialist, Kit Laux, shares information with kids about macroinvertebrates*

## Paperwhite Sale



*Paperwhites growing in the KBIC greenhouse*

The Keweenaw Bay Indian Community Natural Resources Department and the Ojibwa Community College held a plant sale for the holidays to assist with outreach. For this event, it was decided to grow paperwhites as they are a fragrant flower commonly sold during the Christmas season. The Department provided planting supplies, the College provided the bulbs, and staff did the potting together. The paperwhites were grown in our own geodesic dome greenhouse along with the sweetgrass plugs available for a donation. The plant sale was held at the tribal government offices, The Pines, and the Ojibwa Community College and began on December 19<sup>th</sup>, 2013. Advance orders and delivery service was provided and plants were donated to several institutions. Proceeds from the sale will be used for department outreach; events such as the Annual Kids Fishing Derby, Environmental Fair, and Wild Rice Camp. Through community support we raised just under \$1500 to assist us in the cost of hosting these events. We hope to have more fund raising activities in the future and wish to thank everyone for their generosity.



## Support the Wild Turkey Population

Spring has sprung and with it comes the spring turkey hunting season. Spring is a critical time for turkeys because females are incubating their eggs. Killing a single female turkey during spring potentially kills an entire clutch (10-12 eggs). That is a huge loss to the population. Last spring was an exceptionally harsh time for all wildlife, including turkey due to the late green up. So far, it is not looking very good for this spring either. So, as you head out for turkey hunting season, please do your part to support wild turkeys by taking it upon yourself to be a steward by choice and avoid shooting female turkeys in spring. This is the best way to ensure the greatest reproductive success in our local wild turkey population. Gobble gobble and miigwech!



## KBIC Culvert Projects

Since 2011, KBIC Natural Resources Department has partnered with USDA Natural Resource Conservation Service (NRCS), the Baraga County Road Commission, and KBIC Public Works to establish the western portion of the Dead-Kelsey watershed as a priority area for restoring aquatic organism connectivity. The partnership initially developed through the completion of a Rapid Watershed Assessment project which identified numerous road crossing locations that caused passage obstructions for aquatic organisms due to perched, blocked, crushed, or undersized culverts. With GLRI support the partnership has improved the health of the stream system on watersheds in and around the KBIC Reservation. Thus far, GLRI program funds have contributed \$137,000 towards restoring 6 of 12 obstructed road stream crossings and restoring connectivity to 29 total miles of stream. Additional funds were provided by USDA Wildlife Habitat Incentives Program (WHIP) and U.S. Fish and Wildlife Service. Reservation streams are home to brook trout and many other cold water species. Four more restoration projects for aquatic connectivity are scheduled to occur in 2014 for an additional 25 miles of connectivity.



*Culverts on Golf Course Road before replacement*



*Culvert on Golf Course Road after replacement*

# Michigan Wolf Management Update

The first legal wolf hunt in Michigan took place November 15 through December 31, 2013. There were three wolf management units (WMU) designated for allowable take with a limited harvest of 43 total wolves of which 23 were taken. Quotas per WMU and results were as follows:

- **WMU A** in Gogebic County in the far western U.P. had a quota of 16 wolves and 5 were legally registered with the State.
- **WMU B** in portions of Baraga, Houghton, Ontonagon, and Gogebic counties (including the western half of the KBIC L'Anse Reservation) had a quota of 19 wolves and 14 were legally registered with the State.
- **WMU C** in portions of Luce and Mackinac counties had a quota of 8 wolves and 4 were legally registered with the State.



*Wolf captured on a KBIC remote camera*



*KBIC wildlife technician Kyle Seppanen investigating a wolf trail*

Wolf hunt licenses are not available through KBIC for tribal hunters. Tribal Council passed a resolution in 2012 against hunting and trapping of wolves within the Home Territory which encompasses the western U.P.

There is some speculation that trapping may become allowable for the 2014 Michigan wolf season to attain quotas. This would significantly increase the numbers of wolves harvested in Michigan. Minnesota had an early 2013 hunting only season with harvest of 88 wolves. They also had a late hunt and trapping season harvest of 149 wolves of which 76% were killed by trappers and surpassed the overall state quota by an additional 17 wolves. The Wisconsin 2013 harvest of 257 wolves surpassed the quota of 251, and 67% of all wolves harvested were killed by trappers.

*Keep Wolves Protected*, a coalition of Michigan residents, successfully circulated a petition to place a wolf hunt referendum on an upcoming 2014 ballot to end the wolf hunt. However, regardless of the outcome from Michigan voters, the Natural Resources Commission (NRC), a politically appointed seven person panel, was already empowered by Senate Bill 288 to designate animals as game species without legislative or voter oversight. The S.B. 288 was passed prior to the certification of the petition and therefore the NRC does not have to relinquish its decision based on the petition or votes. The next option would be to place a referendum against S.B. 288 on the ballot.



# Partnership for Watershed Restoration



*Participants in the PWR meeting hosted by KBIC*

On Wednesday, February 26<sup>th</sup>, KBNRD hosted the second face to face meeting of the Partnership for Watershed Restoration (PWR) group at the Big Buck's Bingo Hall. Forty-nine participants from 28 different organizations including state, federal, local, and non-profit organizations attended the meeting. The meeting opened with a welcome from KBNRD employees Pam Nankervis and Erin Johnston. The morning session was focused on reviewing the mission statement and guiding principles of the PWR group. The current mission of the PWR group is *"To promote protection, restoration, and habitat improvement activities in watersheds that lie within the South-Central Lake Superior basin to achieve Coalition members and community needs through collaboration and partnerships."* The afternoon consisted of breakout sessions to discuss topics such as education and outreach, connectivity, invasive species, monitoring/information/planning, restoration, and conservation.

The first face to face meeting was held last July in Black River Harbor. The first meeting focused on networking and assessing the needs and benefits of a multi-agency/organization group to address issues in the South-Central Lake Superior basin. By the end of the day it was clear that participants saw value in continuing to meet and discuss ways to collaborate to address issues in the Lake Superior basin, such as connectivity and invasive species. KBIC Wildlife Biologist, Pam Nankervis is taking the lead on a Landscape Conservation Cooperative (LCC) grant to prioritize stream connectivity projects in the Western U.P. across jurisdictions. We successfully secured \$153,106 in funding from the U.S. Fish and Wildlife Service for the two year project entitled: Collaborative Restoration of Aquatic Resources in the South Central Lake Superior Basin. This initiative is a direct result of the PWR group with fifteen partner agencies taking part in the connectivity project. We hope to see more collaboration develop in the next few years as the PWR group moves forward and participation increases.



# KBIC Hosts Wild Rice Camp

Wild rice camp was held at the Keweenaw Bay Indian Community's Pow Wow grounds with the assistance of Great Lakes Indian Fish and Wildlife Commission and Lac Vieux Desert. Camping fees were waived for the weekend for participants and there was a feast given on Saturday evening. Forty-four people signed up for camp and the Keweenaw Bay Ojibwa Community College partnered with The Natural Resources and Forestry Departments to give continuing education units for participants. Roger LaBine, Lac Vieux Desert, gave a history of manoomin "wild rice" and instructions on the construction of tools needed for harvesting and processing including; knocking sticks, push-poles, paddles, and winnowing baskets. With the camp being held later in the season, rice harvested earlier in the month by the Natural Resources Department, as well as rice purchased by the Cultural Committee, was used for processing. Traditional processing methods were used with Roger demonstrating parching, dancing, and winnowing techniques. GLIFWC provided parching pans and thrashers to show alternative ways of processing. Participants who processed manoomin were given a pound at the end of the camp, the rest going back to the Cultural Committee for community feasts

and the Natural Resources Department for the next camp. Sand Point Sloughs rice bed was sown with green rice during the weekend and people had the opportunity to practice harvesting at this time. There were also maps of nearby beds for those wishing to check out additional areas. It was a great opportunity to get together and share in this culturally significant food.



*Preparing wood to make knocking sticks*

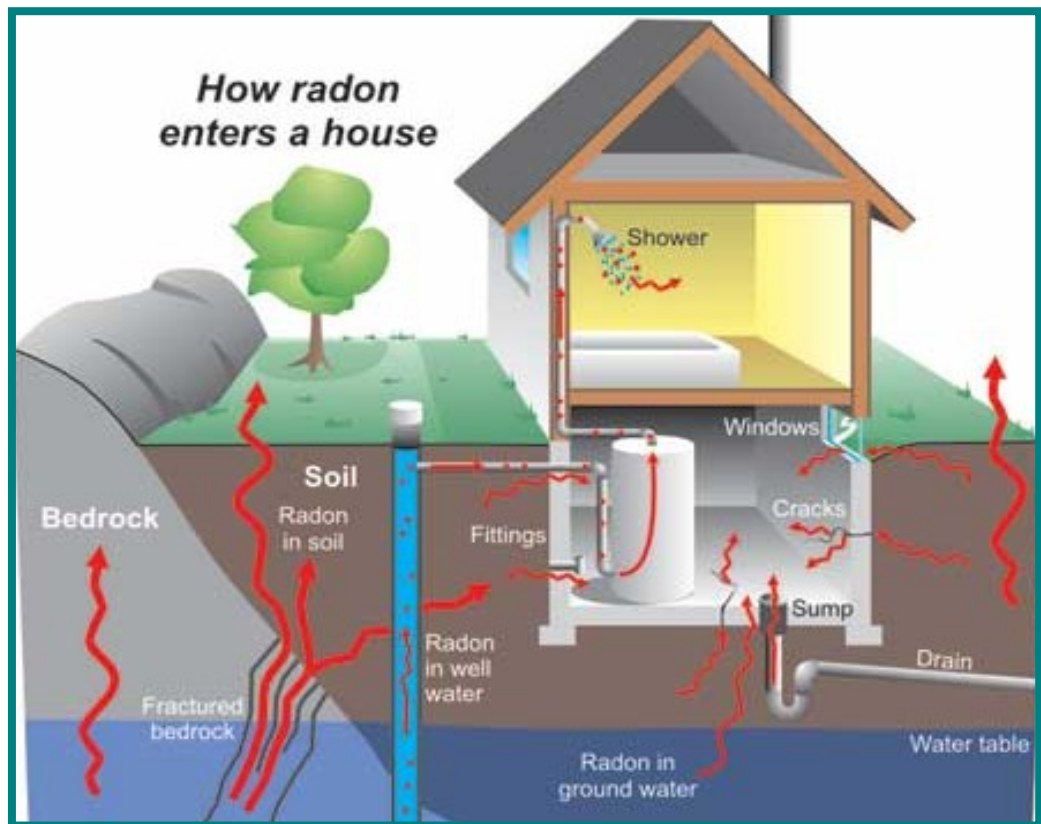


*Roger LaBine dancing on the rice*



*Roger LaBine demonstrating winnowing techniques*

# Air Quality-Radon



## ***What is Radon?***

Radon is a naturally occurring gas that comes from various rocks, soils, and underground water sources. Radon forms from the breakdown of the natural elements uranium and radium.

## ***How does it get in houses?***

If radon is in your house, it can get in through any tiny space that comes in contact with soil that contains radon or through groundwater. Radon comes from the ground and can enter a building from the soil. Radon changes from a solid form into a gaseous or liquid form and can be released from the soil and groundwater. One way radon can get into buildings is by cracks in the basement, and if there is not good ventilation, radon concentration can be harmful.

## ***Why is it bad?***

Radon gives off radiation that can cause lung cancer. Radon is second only to smoking as a cause of lung cancer. It's a silent killer, since people can't tell if they're being exposed.

## ***How should I check for radon?***

Test your home! The KBIC Natural Resources Department provides free radon test kits.

## ***What to do if my radon is high?***

You have tested your home for radon and confirmed that you have elevated radon levels — 4 picocuries per liter (pCi/L) or higher. The EPA recommends that you take action to reduce your home's radon levels if your radon test result is 4 pCi/L or higher. High radon levels can be reduced through mitigation. The average cost of a radon system is between \$800 – \$1200.



# The People's Garden

Food sovereignty is a state of being in which “community residents obtain a safe, culturally acceptable, nutritionally adequate diet through a sustainable food system that maximizes community self-reliance and social justice.” There are many foods to be found in area waters, forests, and markets. If we grow our own food and have control over our food supply, we decide on the quality of food we eat. Vegetable gardens and local farmers markets provide a variety of crops without the extra cost of storage, packaging and transportation. There are a lot of health benefits to using non-processed foods. Learning to harvest encourages self-reliance and traditions that have been here for generations.

In response to community member requests, KBNRD began to explore the possibility of establishing community gardens. In 2013 KBNRD developed a garden near the walleye ponds in L'Anse on Brewery Road. The area was fenced in and the Department attempted to grow a variety of vegetables. This year the People's Garden will be a plot based community garden system open to all community members with preference given to KBIC tribal members. The garden is set to open June 15<sup>th</sup>. For more information contact Erin Johnston at [ejohnston@kbic-nsn.gov](mailto:ejohnston@kbic-nsn.gov) or 524-5757 ext. 24.



*View of fenced in plots and raised beds at the People's Garden*

## Household Hazardous & Electronic Waste

### Collection Event

KBIC hosted a free household hazardous, white goods and electronic waste collection event in September. The collection event was open to tribal members and all non-tribal residents of Baraga County. Over 9,000 pounds of household hazardous waste was collected. Wastes collected included used oil, old gasoline, pesticides, mercury, oil filters, car batteries, and other hazardous materials. The collection event was considered a big success by all involved considering that Baraga County only has about 8,860 residents. A fall Milk Run added an additional 9,208 pounds of waste for a **total of 19,096 pounds of waste collected between the two events.**

All waste collected was recycled or disposed of depending upon material type. Proper handling and disposal of hazardous waste materials is a critical part of preventing potential contaminant release to the Lake Superior ecosystem which helps protect this precious resource. With the help of U.S. EPA Great Lakes Restoration Initiative funding we will be able to establish a regular collection program, leading to increased protections for our wonderful Lake Superior.

# Pollinator Friendly Practices

By Jan Schultz, US Forest Service (Eastern Region)

An estimated 1 out of 3 bites of food we eat comes to us via the *Ecosystem Service of Pollination*. Insect pollination produces \$40 billion worth of products annually (US). Worldwide, of the estimated 1330 crop plants grown for food, beverages, fibers, and medicines - about 75% are pollinated by animals (as opposed to the wind). Thank you butterflies, bees, and hummingbirds!

PFP guides are used by organizations in locations such as schools, private industry, public spaces, agriculture, forests, homes, and more. They are used to expand existing land use incentives and also to inform and promote pollinator friendly land use practices. Some of the following information may be fairly obvious and some may represent new ideas with regard to how to coexist with our native pollinators and the essential job that they perform. The following is a summary of practices that help our pollinators.

**A. Foraging Habitat.** Is there sufficient habitat for foraging pollinators (i.e., native bees, butterflies, hummingbirds, etc.), and are the plants used of high value to the pollinators? Which plants are used? Are cultivars used? (They may not be useful.) Are the plants used native to the locale? Is there continuous bloom through early spring through fall - pollinators need food through season. The plants should be clustered en masse.

**B. Reproduction.** Butterflies and moths need appropriate larval food plants. Native bees need sufficient ground nesting areas, snags, or bee blocks. Nesting materials such as leaves, petals, plant down, mud, water and nesting sites are important. For bees, both nesting and foraging habitat should be close together to benefit the most species and provide best conditions. Hummingbirds require sufficient nesting habitat.



Purple cone flower



Pollinator in action at the KBIC Sand Point restoration area



# Pollinator Friendly Practices Continued

**C. Shelter.** Is there shelter - windbreaks, proper plantings, and overwintering areas? Shelter belts provide nesting sites and cover for butterflies in windy and adverse weather. Shelter is important in urban areas, where lack of vegetation is common and wind tunnels may be severe. Foraging areas should be in the sun early in the season, the position of nesting sites should be planned in relation to trees or shelter. Exposure to sun at appropriate times of day ensures the success of bee nesting sites. Nesting blocks need sun on the holes in the morning but not the afternoon. Bumblebees prefer partial shade for nesting. Most ground nesting sites should be south-facing, so they receive sun for much of the day.

**D. Invasive/Exotic Plant Species.** Do native plants dominate the area and are invasive plants controlled? Invasive plants degrade native pollinator habitat and should not be planted. Native plants should comprise + 75% of a habitat. If a site is overrun and no control activity is implemented, it is not probably pollinator friendly. Turf-grasses, for example, are not native. Many common garden annuals are not native but are not invasive (i.e. zinnias), and provide excellent nectar sources for gardens and backyards. This is acceptable, as long as adequate native perennials are also provided.

**E. Chemical Use.** Integrated pest management is a critical component of safe habitat for pollinators. Typically, pesticides should not be used. Herbicides should only be used during the establishment phase when there is no feasible alternative. Emphasis should be on a thoughtful, educated approach to chemical use, and to a reduction and ultimate elimination of its use.

**F. Monitoring/Length of time.** Is the site monitored over time? What pollinators use the site? Can the site be used for educational and community outreach?



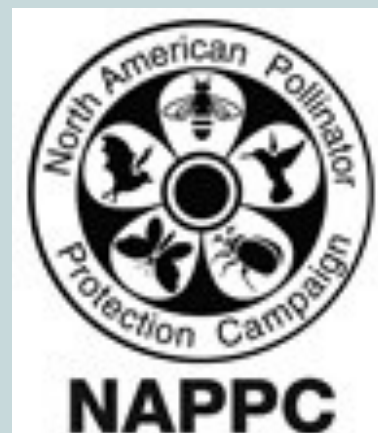
Please take a look. To learn more please visit:

Celebrating Wildflowers/ Pollination. <http://www.fs.fed.us/wildflowers/pollinators/index.shtml>

North American Pollinator Protection Campaign <http://pollinator.org/nappc/index.html>

Pollinator Partnership <http://www.pollinator.org/>

Xerces Society <http://www.xerces.org/>



# Mining Updates

## What's going on at Eagle Mine?

Construction of the entire mine and mill project is about 80% complete. The bulk of construction activity has been at the Humboldt Mill along US 41, including the development of a waste water treatment facility. As the company gets ready for mill operation, the US Environmental Protection Agency is simultaneously completing a Superfund Site Investigation based on historical mining contamination. In addition, extensive land clearing has taken place for the development of a haul road from Eagle Mine to Marquette County Road 550, with no environmental impact assessment as should be required under Michigan's Part 632 hardrock mining regulations regarding transportation routes.

A Groundwater Discharge Permit was up for renewal at Eagle Mine earlier this year. The KBIC Tribal Mining Program conducted review of this permit and assisted in the preparation of written comments to the Michigan Department of Environmental Quality (MDEQ). Without mine production started yet, the Eagle Mine had violated its initial permit more than 100 times according to data provided by the Superior Watershed Partnership. The MDEQ attributes most of these violations to naturally occurring background levels, even though these levels changed from 2004 baseline data and after hundreds of exploratory drill holes stirred up rock potentially affecting the aquifer. KBIC is concerned about the long-term risks posed by more than 500,000 gallons of mine wastewater discharges into ground water per day. Any contaminants will vent to surface waters relatively nearby – water that supports medicinal plants and berries, fish and aquatic life, and other wildlife. These are all important Treaty-reserved resources located within the pristine Salmon Trout River watershed.



*Eagle Mine Haul Road development AAA SW. Photo credit: Jeremiah Eagle Eye*



## Keweenaw Stamp Sands

While the copper mining boom ended decades ago, its environmental impacts continue today. Approximately 500 million tons of stamp sands, a waste product of historic copper mining, were deposited across the Keweenaw Peninsula and directly into inland lakes, streams and Lake Superior. Stamp sands contain trace metals, and some were reprocessed with toxic chemicals to reclaim additional copper before returned to land and waterways.

Stamp sand contamination levels vary, but they are known to leach arsenic, lead, copper and mercury. Human health may be affected by these metals if exposed through drinking water, inhalation or ingestion, and fish consumption. Where stamp sands dominate, land is unable to support vegetation and lake areas are devoid of benthos. Benthos is bottom dwelling aquatic organisms critical to our ecosystem as a food source for fish and filter for water quality.

Stamp sands are hazardous to our fisheries due to their large amount of fine material that fill in small rock openings used to shelter eggs and young fish. Buffalo Reef in Grand Traverse Bay near the town of Gay is an important Lake Superior whitefish and lake trout spawning area threatened by en-



*Stamp sands along the shoreline in Gay, Michigan. Photo credit: Michigan Technological University*

croaching stamp sands. Tribal fish harvesters have federal treaty rights to fisheries and depend on them for subsistence, cultural identity and economic well-being.

Proposed deregulation of stamp sands was introduced this spring in the Michigan legislature, which will reclassify stamp sands as non-hazardous under the Michigan Natural Resources Environmental Protection Act. If signed by the Governor, this reclassification of stamp sands may confuse public perception and hinder environmental management objectives necessary to restore the Keweenaw and treaty-reserved resources that have been degraded in areas by legacy mining activities.

## Prospective Copper Mining District

The western UP, from Ironwood to Copper Harbor, is being explored and considered for copper mining development by Canadian-based Highland Resources (Keweenaw Copper Company). At the forefront of this prospective mining district is the former White Pine Mine near Ontonagon. Highland announced plans to purchase White Pine last November, with interest in a deposit to the north along with potential regional metal processing. In February, the company subsequently announced plans to acquire Copperwood Project from Orvana Minerals Corp., a deal that was finalized on June 17. In addition, two sites in the Keweenaw are currently focused on for exploratory drilling efforts, 543S in Eagle Harbor and G-2 in Grant Township.

## Youth Mining Education with Cookies

Over 250 local youth, grades 2-5, had an opportunity to learn about mining and its environmental impact at KBIC's annual Environmental Fair on April 23. When first approaching the Cookie Mining activity booth, most didn't know anything about mining. Some knew that copper and diamonds are mined, a few mentioned a father or uncle who works in a mine, and a few play a mining video game. KBNRD's Mining Technical Assistant provided a brief introduction to the mining cycle and its impact to land, water and wildlife. Next, each youth was given a couple minutes to mine chocolate chips out of a cookie with tooth picks. Afterward they were asked to put the cookie back together how it was found before mining. The youth received a yummy hands-on lesson that it can be very difficult to put the land and environment back the way it was prior to mining.



*Kids "mining" for chocolate chips at the KBIC Annual Environmental Fair*

# Meet Jacob, the KBIC AIS Educator/Boat Washer

Boozhoo,

My name is Jacob Haapapuro and I am a member of KBIC. I have been hired as a Seasonal Aquatic Invasive Species (AIS) educator/boat washer. This is a new position with the KBIC Natural Resources Department, which is funded through the United States Forest Service (USFS). The goal of this program is to raise awareness of AIS and educate the public on how to prevent the spread of damage causing invasive species, while providing a free boat wash to sanitize boats and trailers. I have worked for the natural resources department (NRD) over the years holding several titles: plant and fish technician, I have even interned at the NRD.

I'm currently pursuing a Bachelor's degree in Civil Engineering; I am a Junior at Michigan Tech. NRD has taught me valuable lessons that I plan to apply in my studies and I would enjoy working in a water resources field.



## Calendar of Events

### JULY

July 3-4—**KBIC Government Offices Closed**

July 14th-17th—**Public Weed Pulling. Ojibwa Recreation Area (Sand Point). 9am-4pm.**

July 18th—**KBIC Lake Superior Day Beach Clean-up. Ojibwa Campground/Sand Point Day Use Area. 8:30am—Noon.**  
Lunch provided.

July 20th—**Official Lake Superior Day**

July 23rd — **Keweenaw Bay Water Walk. Meet at sunrise at Pequaming Point in L'Anse.**

### AUGUST

August 5th-6th — **Crop Wild Relative Workshop. NRD and U.S. Forest Service.**

### SEPTEMBER

September 1st — **Labor Day Observed. Tribal Government Offices closed.**

September 20th—**Household Hazardous and Electronic Waste Collection Event. Ojibwa Casino parking lot. 9am-1pm.**  
**Open to all Baraga County residents.**

September 26th — **Michigan Indian Day observed. Tribal Government Offices closed.**

**\*Wild Rice Camp in September—TBD.**